



THOMAS G. NEWMAN,
EDITOR.

Vol. XXIV. Nov. 21, 1888. No. 47.

EDITORIAL BUZZINGS.

He who plants a tree Plants a hope.

Rootlets up through fibers blindly grope;
Leaves unfold into horizons free.

So man's life must climb
From the clods of time
Unto heaven's sublime.

Canst thou prophesy, thou little tree,
What the glory of thy boughs shall be?
—Exchange.

That Melissa Honey mentioned by Mr. A. C. Tyrrel, on page 749 of our last issue, came to hand a few days ago, after that JOURNAL was printed. It is of excellent quality, thick body, and pleasant to the palate; though amber-colored, it will be found good for table and other uses. It has rather a pungent taste, which is more pleasant than otherwise.

Mr. Ivar S. Young, who visited the apiarists of America last year, has published some very disparaging and untruthful things about Americans. The head-master of the Grammar School in Christiania makes an apology for Mr. Young in these words, as published in the *Canadian Bee Journal* for Nov. 7:

Mr. Young... is very warm-blooded, and therefore at times rash and unconsiderate, and says things that had better be left untold.

True: and now let us hope that a sense of honor will lead him to correct the many erroneous things he has already said. We have written to him, pointing them out, and given him a chance to set himself right in the matter, as publicly as the misstatements were made. If he does so, Americans will forgive and forget. If not, they will know the measure of the man and the clothes which best suit him.

The Review of the new edition of "Cook's Manual of the Apilary," by the editor of the *British Bee Journal*, which may be found on pages 760 to 762 of this JOURNAL, is a very complete, fair and thorough criticism. While in general it meets our approval, there are some matters which are still open to discussion. Many are not ready to adopt the view that "honey is digested nectar," nor is the question, "Do bees hear?" settled to the satisfaction of some of our best-informed apiarists. But the matter, as discussed in the Manual and by the reviewer, is well worth careful study and investigation.

The reviewer makes repeated comparisons between Prof. Cook's Manual and the work by Mr. Frank Cheshire, and points out the superiority of the Manual in many respects. It is to be regretted that typographically comparisons result the other way. Mr. Cheshire's magnificent work is printed in the highest style of the art, on beautiful paper, and the illustrations are superb. It is a disappointment not to be able to truthfully say as much of Prof. Cook's Manual. The exceedingly fine illustration on page 46 of Mr. Cheshire's work is a marvel of beauty and excellence; in contrast, those on pages 306 and 307 of Prof. Cook's book are so badly printed as to be almost indistinguishable—caused by the inferior quality of ink and paper, and worse press work.

Giving credit for the illustrations is mentioned by the reviewer as commendable, and so it is, but unfortunately the Professor has therein made thirteen mistakes. This is a matter of but little importance, but it might be corrected in future editions.

Take it all in all, Americans have cause for pride in the many excellencies of the new edition of Prof. Cook's Manual.

Mr. George K. Hubbard, an apiarist of La Grange, Ind., has taken unto himself a wife. The pleasant ceremony occurred on the 8th inst. The bride was Miss Josie L. Spires, of Tiffin, O., a teacher in the public schools. The BEE JOURNAL extends congratulations, and wishes for them unbounded happiness and lots of honey.

Wooden Comb.—An exchange says that Mr. Aspinwall has, this summer, used wooden combs; that is, we presume, a midrib of thin wood, with the combs built on each side in the brood-chamber. It adds:

If the wintering of his bees in this comb is as successful as the summer experience, it will prove quite an innovation in bee-keeping. After making, these wooden combs are treated in hot wax, and are readily accepted by the bees, while the treatment prevents any effects of moisture on them.

The Date on the wrapper label of your paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to carry the date another year ahead.

Fun for the Boys.—This time it is made by one of the "girls"—Mrs. Lucinda Harrison, in the *Prairie Farmer*. She is always saying something original and amusing. Here is her latest dose:

OBITUARY.—Died at Columbus, O., Oct. 4, 1888, the North American Bee Keepers' Society, aged 19 years and 1 day. Services held at Representative Hall at the State House, Dr. Thomas G. Newman, of Chicago, officiating; Dr. C. C. Miller, leader of music; pall-bearers, Dr. Mason, Dr. Besse, Dr. Tinker, Prof. Cook, Sec. Hutchinson and R. F. Holtermann.

The heir to this inheritance is known as "The International American Bee Association," and includes in its territory "all of the United States and Canada." I cannot see why the heir does not inherit the whole estate. Perhaps it is reserved for minor heirs. I thought North America extended from Behring Strait to the Isthmus of Darien. It is not stated what disease the parent died of, but I infer it was a dose of too much doctor, as there were many in attendance.

That is the unkindest cut of all, especially after dubbing the editor of the BEE JOURNAL as "Doctor!" "Died of too much doctor." It is a pity that Mrs. Harrison was not there to soothe its last moments, and administer consolation.

But it is the old proclamation: "The King is dead! Long live the King." The same announcement of death is also one of life. One succeeds the other instant. The "North American" is dead, but the "International" lives, and by many reforms and improvements expects to merit and obtain the fealty and devotion before given to the one it has now succeeded.

Let us **all pull together** for success, and heed the moral of the following bridal story:

An eccentric bride-groom requested his bride to accompany him into the garden a day or two after the wedding. He then threw a line over the roof of their cottage. Giving his wife one end of it, he retreated to the other side, and exclaimed, "Pull the line!"

She pulled it, at his request, as far as she could. He cried, "Pull it over!"

"I can't," she replied.

"Pull with all your might!" shouted the whimsical husband.

But in vain were all the efforts of the bride to pull over the line so long as the husband held on to the opposite end. But when he came round, and they both pulled at one end, it came over with great ease.

"There," said he, as the line fell from the roof, "see how hard and ineffectual was our labor when we pulled in opposition to each other, but how easy and pleasant it is when we both pull together. If we oppose each other, it will be hard work; if we act together, it will be pleasant to live. Let us therefore always pull together."

Moss for Winter Packing.—According to *Tidskrift for Biskjotsel*, moss is very often used in Norway for winter packing, and it is spoken of as very excellent. They let it dry, when it is green, and in this state it will better absorb the moisture from the brood-chamber than anything else. It never becomes musty, but is called to life again by the moisture, and will be as green and fresh as ever.

GLEAMS OF NEWS.

Hunting Bees in Australia.

The following very interesting account of bee-hunting in Australia, is from an exchange:

The wild bee of Australia differs little in size or appearance from our common honeybee, and is stingless. Most of the trees in that country are hollow, and it is in the cavities of the branches that the bees deposit their honey, at a considerable distance from the ground. It is of an aromatic taste, and chiefly gathered from the leaves and blossoms of the different trees that clothe the whole country, from the summits of the mountains to the sea-shore, with the exception of occasional plains, which are of rare occurrence. By the aborigines of Australia this honey is regarded as a great luxury, and it is very interesting to note with what sagacity they contrive to indulge their taste for it—searching it out with infallible eye-sight, and with amazing delicacy of touch. Their method of finding these natural hives, which are not numerous, is curious, not only from the fact that the most minute observation, and the most delicate manipulations must have been required to enable the inventor of it to succeed, but also because it displays a knowledge of the natural history of an insect, such as I can venture to say, a large portion of the civilized world does not possess.

From the absence in many parts of the bush of Australia of flowers, the little native bee may be seen busily working on the bark of the trees, and unlike the bee of this country, which is ever on the move from flower to flower, it seems to be unconscious of danger. This may arise from the vastness of the solitude in Australia, which are seldom or ever disturbed, except by a passing tribe, or by its own wild denizens, which are far from numerous. The bee is therefore easily approached, and the bright, clear atmosphere of the climate is peculiarly favorable to the pursuit.

A party of two or three natives, armed with a tomahawk, sally forth into the bush, having previously provided themselves with soft white down from the breast of some bird, which is very light in texture, and at the same time very bluff. With that wonderful quickness of sight which practice has rendered perfect, they descry the little brownish, leaden colored insect on the bark, and rolling up an end of the down feather to the finest possible point between their fingers, they dip it in the gummy substance, which a peculiar sort of herb exudes when the stem is broken, they cautiously approach the bee, and with great delicacy of touch place the gummed point under the hind legs of the bee. It at once adheres. Then comes the result for which all this preparation had been made. The bee, feeling the additional weight, fancies he has done his task, and is laden with honey, and flies off from the tree on his homeward journey, at not a great distance from the ground. The small white feather is now all that can be discerned, and the hunt at once commences.

Running on afoot amid broken branches and stony ground, requires, one would think, the aid of one's eyesight; but with the native Australians it is not so. Without for a moment taking their eyes off the object, they follow it, sometimes the distance of half a mile, and rarely, if ever, fail in marking the very branch where they saw the little bit of white-down disappear at the entrance of the hive. Here there is a halt, the prize is found, and they sit down to regain their breath, before ascending the tree, and to light a pipe, to which old and young, men, women and children, are extremely partial.

When the rest and smoke are over, with one arm round the tree, and the tomahawk in the other, the blackman notches in the bark, and placing the big toe in the notches of this hastily constructed stair, ascends till he comes to where the branches commence. Then putting the handle of the tomahawk between his teeth, he climbs with the ease and agility of a monkey, until he reaches the branch where last he saw the white-down disappear. He then carefully sounds the branches with the back of his tomahawk, till the dull sound as distinct from the hollow sound, tells him where the bees are. A hole is then cut, and he puts his hand in and takes the honey out. If alone, the savage eats of the honey until he can eat no more, and leaves the rest. But if others are with him, he cuts a square piece of bark, and after having his part as a reward for his exertion, brings down a mass of honey and comb mixed up together, which, though not inviting, is greedily devoured by his partners below.

Bee-Association for Maryland.

—An enthusiastic correspondent of the State of Maryland, writes as follows on the subject:

I wish to call attention to the fact that there is not in our State (Maryland) a bee-keepers' association, although it embraces three of the largest supply depots in the country, and therefore suggests a goodly number of bee-keepers. Among the "Editorial Buzzings" of the AMERICAN BEE JOURNAL of Nov. 7, in an article about the number of bee-societies in America compared with those in Germany, it states as a reason for their scarcity in America, that our bee-keepers "think that they know it all, and there is no need of societies for them. And as for imparting their knowledge to their less confident or less informed brethren—they scoff that idea!" Now shall we not try to remedy this, and add one more to the number of American bee-societies? Can we not organize an association that will call together the bee-keepers of Maryland, and the surrounding country? Or shall we always remain "in short-arm'd ignorance?"

Certainly you can organize a society. Just issue a "call" for a meeting, organize an association, and there is no reason why you cannot have one of the best societies in America.

Here is a hint: If you act at once, you may be the first to affiliate with the "International American;" and that would be quite a "feather in your cap," for the "International" is taking everywhere, and will become the "central sun" of apiculture in America in a very short time.

Act quickly! Strike out for success! Be enthusiastic! These are the watch-words which bring success, everytime.

Ants.—A bee-keeper in Norway, Mr. P. A. Larsen, recommends as a remedy against ants, the use of the intestines of fish. He puts some of it into the nest, and he insists that the ants are always chased away, if this remedy is applied once or twice.

Another gentleman, Mr. C. Omberg, recommends the use of powdered lime. He puts some of it around the hives with the same good effect.

Your Full Address, plainly written, is very essential in order to avoid mistakes.

Food Adulteration was discussed at the annual meeting of the National Board of Trade at Chicago, last week, when considering the advisability of asking Congress to pass a law against adulterated lard. Among other things the preamble sets forth that "such adulteration of lard has grown to be a National scandal, and has seriously damaged the good name of American lard, both in this country and abroad."

The following resolution was, after considerable discussion, carried:

Resolved, That the National Board of Trade recommends to the Congress of the United States the enactment of such laws and regulations as will compel all refiners and dealers to brand all adulterated lard, "Compound lard," or with some brand such as will plainly distinguish the pure from the impure article, in order that the consumers at home and abroad may know the one from the other.

This is all very well, but why not by law condemn all other food adulterations? Almost everything used for food and medicine by man is adulterated, and all should be protected by law from the ill-advised and health-destroying sophistications. If we mistake not, a bill was prepared, and is now pending before Congress, which covers not only the adulteration of food, but also the compounded articles of food.

Every honest man should not only favor and endorse such action by Congress as would compel men to be honest with food of all kinds, including honey; but they should work for the enforcement of such a law to the letter, as well as the spirit thereof.

The low prices of honey have fortunately driven adulterators of that article to the wall. But if the prices advance again, they may revive their nefarious business.

A law against all adulterations is needed, and it should be speedily passed by Congress, and rigidly enforced in every part of the United States of America.

The Honey Season in Norway.

—An editorial in *Tidsskrift for Biskjotsel* for October, says: "This season has for us bee-keepers been a dull one, and the previous winter was still worse. A worse failure in the honey crop will scarcely be heard of. Many colonies had to be fed in the midst of the summer, and many of them starved to death. But now we have a good flow from heather, and we hope that the bees have gathered enough for winter use."

Regarding the heather honey, it is said, in another editorial, that it must be extracted *every day*, because if it is left with the bees until it is capped over, it is *impossible* to get it out of the cells.

We will Present a Pocket Dictionary for two subscribers with \$2.00. It is always useful to have a dictionary at hand to decide the spelling of words, and their meaning.

Dr. Miller's Book, "A Year Among the Bees," and the AMERICAN BEE JOURNAL for one year—we send both for \$1.50.

Women and Bees.

'Tis a fact that can never be questioned,
However absurd it may sound,
That twixt women and bees a resemblance
Most wonderful is to be found.

They have both of them "combs," that is certain,
And in energy neither are lax:
And though honey to both is delicious,
They are both now and then in a "wax."

A wife full of cares economic
Is most like an industrious bee;
And the waist of a wasp on a lady
Is something delightful to see.—Judy.

Rapid and Tireless Work.—Concerning the work performed by bees and wasps, Susan Power, in *Vick's Magazine*, writes as follows:

Early as a man of science may be, Sir John Lubbock entering his study a few minutes after four in the morning, found a wasp already at work on the honey set out of the window. Bees and wasps suck all the honey from flowers and sweets they can carry, fly back to the hive, store it, and come back directly for another supply.

The wasp in question kept at work without a moment's rest until 7:46 in the evening, making a day of sixteen hours. The bee began at 5:45 in the morning, and also left off earlier than the wasp. Each visit from the honey to the hive took about six minutes, and it made ten visits an hour, and a hundred in the day. The wasp made sixty visits between 4:13 in the morning and 6 minutes past 12 at noon, for Sir John timed them all, and gives a table exact to the minute of each return to the honey on the sill.

Sir wasp must have strayed to visit flowers sometimes, or to have a flight by the way, for his time varies from five to ten and 20 minutes between visits, which were kept up till dusk. This was in autumn. In summer they make overtime, and work late in the long English twilights, which are clear till after 9 o'clock.

In fine weather, bees often visit more than 20 flowers in a minute, and so carefully do they economize the sunny hours that if they find one nectary dry in a flower they do not waste time to examine others on the same plant. Mr. Darwin watched certain flowers carefully, and found that each one was visited by bees at least thirty times in a day. In large clover fields, or plains of wild flowers, every one is visited in the course of a day. Mr. Darwin carefully examined a large number of flowers in such fields, and found that every single one had been visited by bees. There is something very pretty in the thought of this tireless, faithful industry of insects, and of two of the most learned men in Great Britain spending whole summer days in the fields with great faithfulness watching the flower industry.

What use in it, you ask, with true modern disregard of any pursuit which does not return its per cent. of interest within the week? Only to find out more of the uses flowers and insects have for each other, that flowers were made to attract and feed bees that they in turn might carry the pollen which fertilizes and secures the seed of plants. Without this careful searching work of the bees in the clover fields and orchards, our field and fruit trees would die out in time.

The Time for Reading has come, with the long winter evenings. We have a large stock of bee-books, and would like to fill orders for them. To read and post up is the way to succeed in any pursuit—in none is it more important than in bee-keeping.

A New Implement for bee-keepers has just been brought out by the W. F. and John Barnes Co. It is a combined scroll saw and a circular saw. Each machine is perfect, neither being impaired by the other. The two machines can be put in one, ready for use either way, in one minute, and each will do its work with absolute success. This combination of uses doubles the value of the machine, at less cost than they can be furnished separately. The capacity of the scroll saw is exactly the same as that of scroll saw No. 7, the warranty as to what that will do applying equally to this. For light ripping, cutting to length, cutting joints, drawer and box work, etc., the circular saw of the combined machine is invaluable. In short, for general use, no more profitable investment can be made by any bee-keeper, or almost any wood worker, than this combined machine with its different combinations and attachments.



Combined Scroll and Circular Saw.

The circular saw, while remaining on its mandrel, can be taken at once out of the way when the scroll saw is to be used. The mandrel is set in its bearing in such a manner as to enable the operator to take the whole (mandrel and saw) from the machine in an instant.

All varieties of joint work can be done truly and rapidly. The table can be handily adjusted up or down by a cam, to allow any desired depth of cut being made by the saws or cutter tools. The circular saws are 6 inches in diameter, and reach 1½ inches above the saw-table. A 7 or 8 inch saw can be used if desired.

Emery wheels, in size up to 1 inch face by 6 inches diameter, can be used to good advantage on this machine.

Those who make their own hives or surplus arrangements will find it an invaluable aid. Its price is \$50, and it can be obtained at this office.

Do Not Fail to get up a club and send it with your renewal for next year.

Conventions as aids to progressive bee-culture, is thus set forth in the *Canadian Farmers' Advocate* for November:

Perhaps there is nothing, aside from periodicals, which so benefits a pursuit as the meeting in convention of those interested in that pursuit. Points which require solution may be discussed, or an idea secured, which leads to an entirely new and valuable train of thought. Amongst bee-keepers these conventions are very general, and the most important of them all is the North American Bee-Keepers' Association. Its last meeting was held Oct. 3, 4 and 5, at Columbus, O. Although the season has been a very poor one for bee-keepers, the attendance was very fair, and embraced four authors of standard works in apiculture.

A new departure was made in the way of a programme. There were but few essays, and a programme committee selected topics for discussion for each session, with a leader for the topic. Whilst many and lengthy essays should be avoided, a medium might be advantageous; and short ones interspersed with lengthy discussions, would bring out and concentrate discussion. Many topics of interest were brought up, and the sessions thoroughly enjoyable.

Brantford, Canada, was selected for the next place of meeting; and as this is only the second time in twenty years that the society will meet in Canada, a very large attendance is expected. Mr. R. F. Holtermann, of that place, is the Secretary.

Let us hope that the next meeting will be a right-royal one, inasmuch as it is to be held in the Dominion of Royalty.

Frank Leslie's Sunday Magazine for December closes the twenty-fourth semi-annual volume. It is filled, as usual, with the most entertaining matter in prose and poetry, fiction and fact. A Christmas anthem, entitled, "Unto Us a Child is Born," composed by Mr. C. Wingham Smith, organist of Plymouth Church, Brooklyn, occupies three pages, and is a brilliant piece of music. A sermon by Dr. Talmage, on "The Veil of Modesty," appeals strongly to American women.

Convention Notices.

☞ The Nebraska State Bee-Keepers' Association will convene at Lincoln, Nebr., on Jan. 8, 10 and 11, 1889. J. N. HEATER, Sec.

☞ There will be a meeting of the Susquehanna County Bee-Keepers' Association at the Court House in Montrose, Pa., on Saturday, May 4, 1889, at 10 a.m. H. M. SEELEY, Sec.

☞ The Pan-Handle Bee-Keepers' Association will hold its next meeting in the R. of P. Hall on Main St., between 11th & 12th Streets, in Wheeling, W. Va., on Nov. 21 and 22, 1888. All bee-keepers are cordially invited. W. L. KINSEY, Sec.

☞ The twentieth annual convention of the New York State Bee-Keepers' Association will be held in the City Hall, Syracuse, N. Y., on Dec. 11, 12 and 13, 1888. G. H. KNICKERBOCKER, Sec.

☞ The 23rd annual meeting of the Michigan State Bee-Keepers' Association will be held in the Council Room at Jackson, Mich., on Dec. 12 and 13, 1888. Greatly reduced rates have been secured at the Hurd House, also at the Commercial House (near the Michigan Central depot) at \$1.50 and \$1.00 per day. A programme is being prepared and excellent essays are already promised. Any bee-keeper having anything new and useful, and finding it impossible to be present, can send it by Express to Jackson, in care of the Secretary, who will place it on exhibition and return it as per orders. Please to come and bring your bee-keeping friends with you. H. D. CUTTING, Sec.

The Indian Summer.

Written for the Home and Farm
BY A. F. BROWNE.

The sunlight, in a warm and mellow tide
Upon this Indian summer day descends;
Earth, sky, and all the view of waters wide
In silent and harmonious beauty blends.

Along the southward slopes, the aftergrass
Still shows the emerald shade of summer time;
With lingering pace a troop of zephyrs pass,
And oft repeat a verse of mystic rhyme.

The vapor ships that slowly cross the sky
Are smooth and fleecy, like the clouds of June,
And only trees that leafless meet my eye
Remind me earth has passed from Nature's noon.

QUERIES AND REPLIES.**Depositing Eggs in the Royal Cells.**

Written for the American Bee Journal

Query 590.—How nearly complete is the royal cell when the queen deposits the egg in it?—S.

About one-third, as to the length.—G. M. DOOLITTLE.

I do not know.—J. M. HAMBAUGH.

Usually it is in the early stages.—MRS. L. HARRISON.

When it is about in the shape of the cup of a small acorn.—M. MAHIN.

Just when they are about the size of a small acorn-cup.—P. L. VIALLO.

Only just started, or in the "acorn-cup" stage.—JAMES HEDDON.

Probably about one-half completed.—C. H. DIBBERN.

It is only advanced to a cup-shaped appearance.—J. P. H. BROWN.

I have seen some barely begun, and others almost large enough to seal over.—C. C. MILLER.

It is like an acorn-cup, $\frac{1}{4}$ to $\frac{3}{4}$ of an inch deep.—R. L. TAYLOR.

I do not remember just now of having seen a queen deposit an egg in the royal cell. You will generally find an egg in the cell when about one-third formed.—H. D. CUTTING.

The royal cell is frequently made around an egg that has been placed in a worker-cell, and I have known the egg to be placed in the royal cell when more than half completed.—A. B. MASON.

It varies much; often in a shallow cup; sometimes in a nearly completed cell.—A. J. COOK.

It depends upon circumstances. I have known the egg to be deposited in

the incipient cup from which the cell is built. The question is mooted.—J. E. POND.

As a swarm sometimes issues before queen-cells are started, it is plain that they are sometimes far from complete. I think that the queen does not always deposit the egg in a royal cell.—EUGENE SECOR.

I have seen this done only once. I held the comb in my hands, I saw the cell prior to the queen's visit, and saw it at the time of visit and afterwards. She undoubtedly laid in it at the time. The cell was about $\frac{1}{2}$ an inch deep. A very fine queen was developed in the usual time from this queen-cell.—J. M. SHUCK.

The queen does not deposit the egg in the royal cell. The workers select a common worker-cell (with a larva from one to two days old); enlarge the cell—perhaps at the expense of three or four adjoining cells—and literally "float" the larva in royal jelly, which is simply partly-digested honey and pollen. The worker-egg, under this treatment will, in 16 days, hatch out into a perfect queen.—WILL M. BARNUM.

I have often seen eggs "standing on end" in the usual way, in queen-cells no deeper than an ordinary acorn-cup. According to my observations none but old or otherwise condemned queens ever lay eggs in queen-cells; and in these cases most likely they are forced to do it by the worker bees. Laying workers and exhausted queens, and sometimes drone-laying queens will lay eggs in queen-cells. But when strong young queens swarm, they usually go out before any cells have been started.—G. W. DEMAREE.

The egg will generally be found in the royal cell when it is from one-fourth to one-third of its length—but sometimes when it is nearer complete.—THE EDITOR.

Does it Injure a Queen to Sting Her Rival?

Written for the American Bee Journal

Query 591.—Is a queen injured by stinging her rival?—ILLINOIS.

No.—P. L. VIALLO.

No.—R. L. TAYLOR.

Not usually.—DADANT & SON.

I think not.—H. D. CUTTING.

Not in the least.—M. MAHIN.

Yes, probably.—MRS. L. HARRISON.

I think not.—J. M. HAMBAUGH.

I think not.—A. B. MASON.

Probably never.—C. C. MILLER.

I think not, but I do not know for certain.—C. H. DIBBERN.

Usually not; but possibly she may be sometimes.—A. J. COOK.

No, sir; but she is by her rival stinging her.—J. E. POND.

I do not know, but I think not.—JAMES HEDDON.

Gracious! I don't know.—J. M. SHUCK.

I think not. Still I should prefer that a good queen should never combat with another queen.—G. M. DOOLITTLE.

I have met with cases where I concluded that they had been injured in this manner.—J. P. H. BROWN.

No; not as I have ever been able to observe—and I have made some observations in this direction.—WILL M. BARNUM.

I never supposed that the constitution of a mule was impaired by the sudden contact of his hind feet with some soft spot on the driver. No.—EUGENE SECOR.

To say that the surviving queen is never injured in her conflict with her rival, may be putting it too strong, but as a rule she is not injured in the least. I know of one case in which the contest between two queens proved fatal to both combatants; which case seems to prove that there are exceptions to the general rule.—G. W. DEMAREE.

Generally she is not injured, but an injury may occur in some cases.—THE EDITOR.

CLUBBING LIST.

We Club the American Bee Journal for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	Club
The American Bee Journal	1 00	...
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine.....	1 50	1 40
Bee-Keepers' Guide.....	1 50	1 40
Bee-Keepers' Review.....	1 50	1 40
The Apiculturist	1 75	1 65
Canadian Bee Journal.....	2 00	1 80
Canadian Honey Producer.....	1 40	1 30
The 8 above-named papers.....	5 65	5 00
and Cook's Manual	2 25	2 00
Bees and Honey (Newman).....	2 00	1 75
Binder for Am. Bee Journal.....	1 60	1 50
Dzierzon's Bee-Book (cloth).....	3 00	2 00
Root's A B C of Bee-Culture.....	2 25	2 10
Farmer's Account Book.....	4 00	2 20
Western World Guide.....	1 50	1 30
Heddon's book, "Success,".....	1 50	1 40
A Year Among the Bees.....	1 75	1 50
Convention Hand-Book.....	1 50	1 30
Weekly Inter-Ocean.....	2 00	1 75
How to Propagate Fruit.....	1 50	1 25
History of National Society.....	1 50	1 25

Please to get your Neighbor, who keeps bees, to also take the **AMERICAN BEE JOURNAL**. It is now so **CHEAP** that no one can afford to do without it.

CORRESPONDENCE.

CENTENNIAL.

The Premiums Awarded at the Columbus Exposition.

Written for the American Bee Journal

BY DR. A. B. MASON.

I have been so busy since getting home from Columbus, O., that it has seemed impossible to write, and send a list of premiums awarded in the Bee and Honey Department of the Centennial Exposition at Columbus, but I will take the time this morning, 2 a.m. I want to give you an article on the Exposition and the Bee and Honey Department, but I shall have to do that some other time.

Mr. Elias Cole, of Ashley, O., was awarded first premium on a foundation mill, samples of foundation for brood-chamber and surplus, and wax extractor; second premium on display of extracted honey, and third on a colony of bees, display of beeswax, display of queens, and bee-hive.

Dr. G. L. Tinker, of New Philadelphia, O., was awarded first premium on a colony of bees, bee-hive, exhibition bee-hive, arrangement for securing surplus, sections and supplies; and third on the best race of bees.

Dr. H. Besse, of Delaware, O., was awarded first premium on a smoker (Bingham's); second on beeswax, foundation mill, sections and supplies; and third premium on display of comb honey, sample of comb honey, honey extractor (Muth's), and wax extractor.

Mr. C. E. Jones, of Delaware, O., was awarded second premium on display of comb honey, colony of bees, race of bees, display of queens, extractor (Root's), wax-extractor, smoker, and arrangement for securing surplus; and third premium on a sample of extracted honey.

Mr. Aaron Goodrich—a gentleman over 75 years old—of Worthington, O., was awarded third premium on a display of comb honey and a display of beeswax; second on a sample of honey-vinegar, and third premium on a display of extracted honey.

Mrs. Mason, who has a larger apiary than I have, was awarded first premium on a display of extracted honey, sample of extracted honey, sample of comb honey, race of bees, honey-cake, honey-cookies, honey-jumbles, and honey-candies; and second premium on honey-plants.

E. E. Mason was awarded first on foundation made on the grounds, for brood-chamber and surplus; second

on sample of comb honey and honey-candy; third on honey-plants.

If I am last on the list, and did not get as many premiums as I might have had if there had not been so much competition, I was not "left out in the cold" entirely. I was awarded first premium on a display of honey-plants, honey-vinegar, display of queens, foundation press, and honey extractor; and second on sample of extracted honey, foundation for brood-chamber and surplus, made on the ground; bee-hive and exhibition bee-hive; and third on supplies.

If I had the time, and did not have the "fear of the editor's waste-basket" before me, I should like to write somewhat in detail of the Bee and Honey Department and the exhibits, exhibitors, and some of those who visited our building during the Exposition, and it may not be wholly uninteresting to say something of our display, etc.

A building 36x60 feet was put up purposely for the apiarian department, and was well filled with everything relating to the apiary.

There were thirteen exhibitors, but only eight competed for premiums, as will be seen by the above list of awards.

A. I. Root sent a whole carload of appliances, and his display included almost everything from a queen-cage to machinery for making sections. It is perfectly useless to attempt to enumerate them, and he had two men there all the time to look after and explain everything about which a question might be asked, and to run the four new machines for making one-piece V-grooved sections. Mr. Root did not compete for premiums. His exhibit, without the machinery, occupied a space of 8x40 feet, and the section machinery occupied a space of 12x15 feet in machinery hall, and attracted a great deal of attention from the thousands and thousands of visitors, during the seven weeks of the Exposition.

Too much could not be said in praise of the gentlemanly conduct and ways of the five different gentlemen Mr. Root had at different times at the Exposition, and it seems but natural to mention Mr. Warner and Mr. Will Turner, who were the first on the grounds to put up the machinery and get things in running order. Then came Mr. Whipple, and Mr. Turner went home. Then these were relieved, and Mr. Art. Pulsifer came and took charge of the machinery, and Mr. Will Weed relieved Mr. Whipple. It was a pleasure to make the acquaintance of these men, and to have their company.

Mr. Aaron Goodrich, of Worthington, O., who keeps bees, as he said, "just for the fun of the thing," occu-

ried a space 20 feet long by 7 feet wide, and exhibited comb and extracted honey, honey-vinegar, and beeswax, which was displayed on shelves that extended up 9 feet. Mr. Goodrich lives about nine miles north of the Exposition grounds, and having rather poor health, his family and friends objected to his making an exhibit, but his whole soul was in the business, and he wanted to help show the world what could be done in exhibiting the progress of bee-keeping in Ohio. He came from home to the grounds every Monday morning, bringing his "provender" (as he called it) and bedding with him, and staid in the building every night until Saturday, when he would go home to spend Sunday with his family.

The first four weeks Mr. Goodrich gained in flesh a pound a week, and the next three weeks two pounds a week, and before the Exposition was over he got so that from eating just enough to keep "soul and body together," he could, to use his own words, "eat a good square meal, and take his rations regularly."

I could tell of a good many interesting things about "Uncle Aaron," as everybody calls him, and so did we exhibitors, but it takes up valuable space; but the pleasure he enjoyed, and his partial restoration to health, more than paid him for all trouble and expense.

At some future time I will try to write about the other exhibits, exhibitors, etc., if acceptable; but time forbids more at present.

Auburndale, O., Nov. 12, 1888.

BUCKWHEAT.

Keeping a Record of each Colony in the Apiary.

Written for the American Bee Journal

BY LESLIE STEWART.

It seems rather queer to me that such bee-keepers as Messrs. G. M. Doolittle, D. A. Jones, etc., should not have found buckwheat a valuable honey-plant, while with me here in New York, it has not failed to give a goodly amount of surplus in the last seven years. In fact, I am beginning to put more confidence in it for a large amount of surplus than any honey-producing plant we have in this locality. To be sure, it has not quite so fine a flavor as white clover or basswood, nor so light colored, and must of course sell for a little less per pound.

I sell the extracted buckwheat honey at 2 cents per pound less than white clover or basswood honey; yet I find

that to my home customers I sell 5 pounds of buckwheat honey to 1 pound of clover or basswood extracted honey.

Buckwheat began to bloom about Aug. 3, this year, and it made lively times for the bees during the following ten days. I had up to this time extracted 50 pounds per colony, on an average, through my entire apiary, while my best colony stored in ten days (from Aug. 3 to Aug. 13) 78 pounds of extracted honey; the second best, 74 pounds, and the third 71 pounds; please remember that this was all surplus, and not one drop taken from the brood-chambers. This honey was well ripened and very nice.

At the above time I had grand hopes of a large crop from this source, and boasted that I would extract over 100 pounds per colony of choice buckwheat honey. But, alas, a cold rain set in, and has kept at it pretty much ever since. Yet my best colony succeeded in storing 109 pounds; second best, 107 pounds; third best, 103 pounds of buckwheat extracted honey. But my entire apiary averaged only 65 pounds, after seeing that all that had been run for extracted honey had enough to carry them until another season.

The above will show that buckwheat is not such a bad honey-plant in some sections, at least in a poor season.

The following report tells how it has done as compared with other honey-plants during the last three years:

In 1886: Extracted white clover, 20 pounds; basswood, 76 pounds; buckwheat, 69 pounds. Of comb honey, no complete sections of white clover; basswood, 52 sections; buckwheat, 48 sections.

In 1887: Extracted white clover, none; basswood, 82 pounds; buckwheat, 68 pounds. Of comb honey, no white clover; basswood, 61 pounds; buckwheat, 50 pounds.

In 1888: Extracted white clover, 25 pounds; basswood, 20 pounds; buckwheat, 65 pounds. Of comb honey, no complete sections; basswood, 20 sections; buckwheat, 50 sections. In the case of comb honey, the number of complete sections are counted.

I keep a careful record of each colony on a small slate, and when I extract, the date of extracting is put down with number of pounds extracted, and the quality of the honey. While with comb honey, an account is kept of the number of complete sections taken off, with the quality of the honey stated.

In the fall I go carefully over the entire apiary, and see that each colony has a goodly supply of winter stores. If one should be found short of stores, it is immediately fed, and the amount deducted from its year's record on the

slate. For instance, colony No. 26 was worked for extracted honey, and the record on the slate is as follows: "Extracted honey, 20 pounds of white clover; 50 pounds of basswood, and 89 pounds of buckwheat—total 159 pounds. I was obliged to feed 10 pounds back for winter stores, leaving a total of 149 pounds as the record for the season."

Now during the month of September, the little slates are all gathered in, and their records with the number of the hive is carefully recorded in a large book for the purpose; and the next spring, should I want a choice breeding queen, I go to the book and select the best colony there indicated, which does not take long.

By the above plan it will be seen that my record is taken after the bees have been given a sufficient supply on which to winter. My bees are all wintered on natural stores. I never have fed a pound of anything else. I positively think that if all the beekeepers would follow my plan in this respect, we would have less honey to clog our large markets, and get a better price for the honey.

Jefferson, N. Y., Nov. 5, 1888.

COOK'S BOOK.

Criticism of the New Edition of Cook's Manual.

Review from the British Bee Journal
BY THE EDITOR.

We are pleased to welcome this the thirteenth edition and fifteenth thousand of Prof. Cook's Manual, which first made its appearance as a modest pamphlet in 1876. So much was this at that time appreciated that it sold rapidly, and Prof. Cook has from time to time enlarged it, until it has grown to contain nearly 450 pages. In the present edition there are 110 added pages, and 31 illustrations; and it has been in a great measure re-written, to bring it up to the knowledge of the present day.

Not only has the practical part been brought up to the present time, but also the first part—treating of the natural history of the honey-bee—has had full justice done to it; for the works of Schiemenz, Schonfeld and others, have been mentioned, and the reader is made acquainted not only with the progress made in the science connected with bees, but also with the names of those to whom we are indebted for the discoveries.

Just fancy any one writing about Parthenogenesis, and not mentioning that to Dzierzon we owe its discovery in connection with bees, made in 1835,

and published by him in 1842; yet hard as it is possible to believe it, an author has recently done so, and only mentions Dzierzon casually in connection with the introduction of the Italian bee in 1853, which enabled him to prove his discovery to be true, yet never once is he mentioned as the discoverer. This is the way many books are made! So conscientious is Prof. Cook in acknowledging where he gets his information, and giving due credit, that in the preface he even mentions where every woodcut is taken from; and this is in striking contrast to the ways of compilers of the present day, who copy right and left without even so much as alluding to those from whose works they copy.....

In Chapter II. the anatomy and physiology of insects, and the honey-bee in particular, are treated. Here we find many new illustrations, and much fresh matter. Describing the antennæ, he agrees with those who, like Leydig, Erichson, Hauser, and others, consider these the organs of smell, and tell us that "while Erichson first discovered the pits in the antennæ, Burmeister discovered the sensitive nerve-ending hairs at their bottom, and Leydig the perforated pegs or tooth-like hairs.

Further, he says, "We may state, then, that the antennal organ of smell consists of a free or sunken hair-like body, which opens by a pore or canal to a many-nucleated ganglionic nerve. We thus understand how the bee finds the nectar, the fly the meat, and the drone and other male insects their mates."

That the antennæ are organs of smell are generally admitted, but some have from time to time endeavored to show that they also contain the organs of hearing. Taking this view, we find Dr. Braxton Hicks, Graber, and Mayer, but the evidence they bring forward is not sufficient to satisfy scientists that these depressions are really organs of audition. This also is our view, and is the one taken by Prof. Cook, for he says, "Mr. Cheshire speaks of small pits in the antennæ, which he regards as organs of hearing. He gives, however, no proof of this, and the pits that he describes are not at all ear-like in their structure. Dr. Packard says that there is no proof that any insects except crickets and locusts have real organs of hearing. He here refers to the ear-like organs situated on the sides of the body of these insects. Dr. C. S. Minot, in reviewing Graber's work, says that it has not been demonstrated that even these tympanal organs are auditory, and adds that all attempts to demonstrate the existence of an auditory organ in insects have failed. That in-

sects are conscious of vibrations, which with us cause sound, I think no observing person can doubt. . . . Every apiarist has noticed the effect of various sounds made by the bees upon their comrades of the hive, and how contagious is the sharp note of anger, the low hum of fear, and the pleasant tone of a new swarm as they commence to enter their new home. Now, whether insects take note of their vibrations as we recognize pitch, or whether they just distinguish the tremor, I think no one knows. There is some reason to believe that their delicate touch-organs may enable them to discriminate between vibrations even more acutely than can we by the use of our ears. A slight jar will quickly awaken a colony of hybrids, while a loud noise will pass unnoticed. If insects can appreciate with great delicacy the different vibratory conditions of the air by an excessive development of the sense of touch, then undoubtedly the antennæ may be great aids. Dr. Clemens thought that insects could only detect atmospheric vibrations. So, too, thought Linneus and Brunet. From our present knowledge this view seems the most reasonable one, for nothing answering in the least to ears, structurally, has yet been discovered."

We are ourselves inclined to the same view, and do not see any reason why bees should not be sensible to vibrations which produce no effect upon us. Our ear is so fashioned that it is sensible to vibrations reaching at the outside to 38,000 in a second. The sensation of red is produced when 470 millions of millions of vibrations enter the eye in a similar time. But between these two numbers vibrations produce on us only the sensation of heat, for we have no special organs adapted to them. There is, therefore, no reason why bees should not be sensible to vibrations even with their touch-organs which do not affect us.

We have examined the antennæ repeatedly with the microscope, both superficially and section by section; and although using instruments second to none in efficiency, we have failed to trace any connection between the organs described by Graber and Mayer and an auditory apparatus. The title of Graber's work above referred to, is *Über neue otocystenartige Sinnesorgane der Insecten*, 1878; and Mayer's, *Sopra certi organi di senso nelle Antenne dei Ditteri*, 1878.

In describing the compound eyes, Prof. Cook gives illustrations from Gegenbower, but we think they do not give such a good idea of the structure of the eye as those of Grenacher, copied by Cheshire, and introduced on Plate IV. of his book. We have a

very beautiful, unique microscopic section of the eye, showing the disposition of the rods, and the decussating nerve fibrils, corroborating Grenacher's views, and showing the accuracy of his drawings. When we were staying at the College, we showed this preparation to the students of Prof. Cook's class, and they were astonished at the beauty of the structure of this organ.

Prof. Cook does not hold the view of a mosaic vision, which, he says, "is now abandoned," but thinks the philosophy of sight in insects is rather like that of higher animals, except thousands of eyes instead of two are used as one. Although their sense of color is very keen, our author believes "more has been made of this matter of color than truth will warrant." We think so, too, and believe that the experiments of Sir John Lubbock go to prove, not that bees prefer one color to another, but that they can be accustomed to recognize a certain color.

There is much worthy of study in this part of the chapter which refers to organs common to most insects, but we have not the space to go through them as carefully as we would wish, or as the work deserves. The second part of the chapter refers more particularly to the honey-bee. Referring to food given to queens and drones, he says Schiemenz and Schonfeld are unquestionably correct in the belief that they are fed by the workers the same food that the larvæ are fed, and reasons from the fact that, as he finds the queen lays over 3,000 eggs a day weighing 3,900 grams, while she herself only weighs 2,299 grams, for her to be in a position to lay nearly double her weight daily can only be possible because she is fed with highly nutritious food, which was wholly digested for her. Schonfeld found that the queen, like the drones, will soon die if shut away from the workers by a double wire cage, even though they have access to honey.

One of the most interesting paragraphs in this chapter is that referring to the glandular organs, which we find very well explained both as regards their structure and functions. Ramdohr, in 1811, discovered a pair of salivary glands in the thorax, and two other pairs were discovered by Meckel in 1846. These have been fully described by Siebold. Their functions are well known. Still Cheshire says on page 72, "and yet dense ignorance respecting them is common to the present day, even such an accomplished German apiculturist as Berlepsch failing to mention them." Had Cheshire looked at page 136 of *Die Biene*, by Berlepsch, he would have found that not only does this distin-

guished German mention them, but that he also describes their functions. Schiemenz goes into the matter very carefully, and in an elaborate monograph, beautifully illustrated, he endeavors to show that they produce a secretion which is the food of the larvæ and queens. This view has been proved to be incorrect, and Schonfeld has fully demonstrated that the food of the larvæ is, as Dufour first pointed out, digested by the workers. Moreover, any doubt as to this being the case has been removed by the experiments of Dr. A. de Planta, who shows that the chyle food of the queen, drone and worker larvæ varies. Prof. Cook explains this very clearly, and then goes on to treat of the honey-stomach with its four-lipped mouth, and shows how the bee can either feed herself or store honey at will.

We ourselves do not believe that the glands supply the larval food exclusively, although we think that secretion from these is added to the chyle food given them. Also, why do the queen and drones have glands? for if they get food as a secretion they do not want them.

This is how Prof. Cook sums up the matter: "Before leaving the subject, it seems well to remark that it would appear that the old view of Dufour, so ably advocated by Pastor Schonfeld, is, despite the arguments and researches of Schiemenz, the correct one. The queen, drone and larvæ do not get this food as a secretion—a sort of milk—but it is rather the digested pollen or chyle modified, as the bees desire, by varying their own food. In addition to this albuminous food the queen and drones also take much honey; thus they need the glands which furnish the ferment that changes cane to reducible sugar, and they have them. If all honey were fully digested, then the drones and queen would not need any glands at all. The fact that the pollen that the larvæ do get is partially digested is further proof that this is chyme, or partially digested pollen."

The legs of bees, with their antennæ—cleaners, claws, spines, and beautiful pulvilli, are fully described and illustrated, as are also the mouth parts and sting. He does not believe that the poison is dropped into the cells to preserve the honey according to Dr. Mullenhoff's theory, but thinks the formic acid in honey doubtless comes from the honey-stomach of the bee.

Chapter III. is devoted to swarming and natural methods of increase. Alluding to the piping of queens, he agrees with Landois that this is a true voice made in the cells, and even also by a queen whose wings are cut off.

He says it is usually asserted that bees do no gathering on the day they swarm previous to leaving the hive, but that is not true. Mr. Doolittle thinks they are just as active as on other days. The reason for clustering of the swarm, he says, is, no doubt, to give the queen a rest before her long flight.

Speaking of honey, he says it is "digested nectar." This nectar contains much water, though the amount is very variable—a mixture of several kinds of sugar and a small amount of nitrogenous matter in the form of pollen. Nectar is peculiar in the large amount of sucrose or cane sugar which it contains. Often there is nearly or quite as much of this as of all the other sugars. We cannot, therefore, give the composition of honey; it will be as various as the flowers from which it is gathered. "Again, the thoroughness of the digestion will affect the composition of honey." He thinks it likely that incomplete digestion and the possible variation in nectar make the determination by the analyst either by use of the polariscope or chemical reagents a matter of doubt. He goes very fully into the action of honey under the polariscope, and shows that too much reliance should not be placed on this test. He finds the specific gravity varies from 1.40 to 1.50. Honey will generally granulate when the temperature is reduced below 70°. Some honey seems to remain liquid indefinitely. Granulated honey is almost certainly pure.

In speaking of honey-comb he says, "The late Prof. J. Wyman demonstrated that an exact hexagonal cell does not exist. He also showed that the size varies, so that in a distance of ten worker-cells there may be a variation of one cell in diameter, and this in natural, not distorted cells." "This variation of one-fifth of an inch in ten cells is extreme, but a variation of one-tenth of an inch is common." We have ourselves carried out a large series of measurements which fully confirm this, and we hope soon to be able to publish the results. He says, as we have also maintained, that bees change from worker to drone cells, not by any system, but simply by enlarging and contracting. The transition cells are usually of four rows, although sometimes there are two or as many as eight."

Prof. Cook says, "An English writer criticises Langstroth's representation of these irregular cells, and adds that the angles can never be less than 100°. This is far from the truth, as I have found many cells where an angle was considerably less than this." We have also got a large number of impressions

taken direct from the comb showing that Langstroth is right. Some combs which we last year exhibited at the *Conversazione* of the British Bee-Keepers' Association had several rows of perfectly square cells which would represent angles of 90°.

Referring to the number of cells to the square inch, he says, "A recent English author, after stating the diameter of the cells, adds, 'The statement, many times made, that 25 and 16 of these respectively is erroneous, as they are not square.' He says these are 28 13-15 and 18 178-375. After many counts he thinks he should have used his eyes rather than his mathematics, for he finds worker-cells per square inch vary from 25 to 29, and drone-cells from 17 to 19 per square inch. Our English author seems quite to have ignored the fact that because of this great variation, and for convenience of calculation, the above figures were adopted as an average."

A very interesting paragraph on pollen and propolis concludes the first part of the work, which occupies 163 pages. It is not rambling and spun out like the writings of some authors, but is concise, clear, and contains all of any value to the bee-keeper. It is also written in a Christian spirit towards those from whom the author differs.

The second part is practical, and is devoted to the management of the apiary. Here the principal hives, appliances, and various methods in use in America are described very fully and illustrated. In this part there is also much new matter added, making it very complete. The Langstroth and Heddon hives have full justice done them, as well as other hives in use in America. Our English bee-keepers will find much useful information, although some of the appliances and methods may not be suited to this country.

All Prof. Cook says as to the management of hives for surplus is as useful for us as for our American friends, but we do not encounter the same difficulties in wintering as they do, therefore we do not need to take the same measures for the protection of our bees. Our methods of open driving and transferring are also simpler than theirs. The chapters following are full of practical information, and from them much may be learned. Honey-plants are treated more completely than in any other work; diseases and enemies of bees, with what is known about them, have also proper attention.

Prof. Cook is the leading scientific authority on all that concerns bees in America, and, as most of our readers know, is a pleasant writer. Being

Professor of Entomology at the State Agricultural College in Michigan, he has the opportunity of testing methods and appliances at the experimental apiary attached to the College, some of the advantages of this being apparent in the book before us. Unlike a recent author, who not only jealously withholds the names of many of the inventors or advocates of particular methods, but in many cases claims them as his own, thinking, no doubt, that he is the man, and that wisdom will perish with him, Prof. Cook is scrupulously particular in giving names. This is as it should be, and we think it shows a much more noble spirit to give glory unto whom it is due than to rob those entitled to it. Altogether the work is a great improvement on the former editions, and is one that no bee-keeper should be without.

BEGINNING.

A Woman's Experience in Keeping Bees.

Written for the American Bee Journal
BY MRS. EMILY CASBON.

You do not know how much pleasure it gives me to read the *AMERICAN BEE JOURNAL*. I do not set myself up as an example for any one, but I have had a little *actual* experience, and if it will be a benefit to any bee-keepers, they are welcome to it.

In the fall of 1886 I bought a colony of bees. They were in a box-hive nailed securely with a glass in front, and a wooden door on hinges. By the way, the bee-man, of whom I bought them, assured me that it was the very best now made. I had been taking the *BEE JOURNAL*, consequently I had read of the Langstroth, and knew better.

It was late in October, and the bees did not have stores enough. I fed them some old honey I had, but not sufficient. My feeder was a very common arrangement, being a pie-pan with wire netting arranged like the shape of the pan. I propped it out of the honey just enough to let the bees eat and not get into it. Being a new hand at the business, I did not think to warm the honey, so they would not take it.

I babied those bees worse than any batch of bread I ever made, and I have made a great deal. On Nov. 14, I put those bees into the cellar, having first tacked wire netting over the entrance to keep them in. I visited them every day or two, to ascertain their condition. I cleaned off the bottom-board every little while, and there were lots of dead bees.

Finally one bright February day I took them out and gave them a flight. How they did enjoy it; from 11 a.m. until after 3 p.m. they hummed and buzzed around.

March came, and the combs were getting moldy, and I took my bees out into the yard. I had a large dry-goods box, with one side off. I put the hive on a soap-box in the larger box, and packed all around with clean pine shavings (I took what came first), then I spread an old floor oil-cloth over the front, and let it down in cold, chilly weather, raising it in warm, bright days. I do not think that this colony had one dozen workers. When they began to work in the spring I fed sugar syrup to hasten the brood, and the result was that by the fall I had a hive full of bees and honey, besides some surplus.

This section southwest of Valparaiso is especially adapted for bees, as there are many acres of asters, golden-rod and Spanish-needle, besides other plants. I should like to obtain some bees on shares, as I want to start a new apiary. There are no bees within miles of here, as most of the farmers are engaged in agricultural pursuits, and do not want to bother with them.

I love to work with them. They never sting me, and I have always handled them without gloves, and sometimes without a veil.

Valparaiso, Ind.

WINTER.

Speculation as to What Kind of a One it will Be, etc.

Written for the Western Plowman
BY C. H. DIBBERN.

The season is now over, and the story of 1888, as far as the bee-keeping interests are concerned, is now told. The general result over the United States and Canada is not very satisfactory, although some very good yields are reported. The general average is perhaps a one-fourth crop, but the bees are in much better condition than a year ago. The prospects for another year are also very much better, as the young white clover plants got a good start, and if we have a reasonable amount of snow during the winter, a good crop next year is almost a sure thing. This being assured, we should do now, before steady freezing weather sets in, everything possible to place the bees in the best condition to withstand the rigors of the coming winter.

Do not be caught by the idea that we will have a moderate winter. The only safe way is to expect a severe

winter every season in the northern States. There is still a great difference between bee-keepers as to in and out-door wintering; but this question has long since been settled in favor of cellar wintering. It takes but five minutes to carry a hive to the cellar, where, if the condition of the colony is all right, they are almost certain to go through the winter in good condition.

On the other hand, it takes much longer to pack them on the summer stands, and requires a great deal of material, such as boxes, lumber, chaff, straw or leaves, and this again has to be disposed of in the spring. This is much more labor than carrying in and out of the cellar, and then one can never feel very safe about the bees when they become buried under the snow, and the mercury persists in dodging far below zero. At such times one can go into his bee-cellar, and hear the gentle hum of contentment from the hives, and feel assured that it is all right, and go to bed and sleep soundly.

Now as to the time of putting the bees into winter quarters, there is some difference of opinion. It is not best to do so too early, nor will it do to wait too long. We once knew an apiary of 340 colonies to be lost, by leaving them out too long, waiting for a favorable time, which never came, to put them away. The bees ought to be allowed to fly as late as possible, as their confinement will be long enough anyway, and on the other hand they should be removed before ice forms on the combs.

It is not always easy to determine just the right time to do this, and one must study the season, whether it is likely to be early or late. Our rule of late years has been to commence storing the hives as soon after the 20th of November as the bees have had a nice day for a flight. Our practice is to carry in 30 or 40 hives at a time, and the same in carrying them out, as otherwise it gets to be tiresome work, especially if the hives are heavy with honey, as they are this year. It is well to put them 5 or 6 inches from the bottom of the cellar, by placing pieces of scantling under them, or bricks answer the purpose nicely if at hand. Of course we know that some bee-keepers are so situated that they cannot winter in-doors, on account of a low location or having no suitable place. As our numerous experiments in out-door wintering have never been very satisfactory, we will recommend such to study the methods of bee-keepers who have met with better success in this matter.

The Time to Sell Honey.

This is the month in which the honey crop should be closed out. If

that is not possible, make it a point to do so before Christmas, as after that time it is usually dull and harder to sell. All the comb honey should be overhauled and scraped of propolis as soon after it comes off the hives, as time can be spared. It should then be graded, and crated in neat, new cases, weighed and marked. All extracting must be finished up early this month, as the honey is hard to remove from the combs in cold weather, and the combs are liable to break.

Apicultural Contemplation.

As we are writing these "notes," and look through the open window at the apiary, the white, blue, red and yellow hives among the trees, whose green and yellow leaves are now fast falling this October afternoon, we cannot help thinking what a pretty scene it is! What a study, pleasure, profit—yes, and it is hard work, too! We have other large interests in the commercial world, but there is nothing we would rather do than to keep bees, and that is what we expect to do in our declining years. Work becomes a pleasure and a study when one learns from nature as we go along. To discover new principles, new methods, and new facts one's own self, is like exploring some unknown country, interesting, fascinating, but never satisfied. Something new and unknown, that appears to be hidden just beyond the distant hills, is ever leading onward and upward.

Extracting Honey from Brood-Frames

Lately we have extracted considerable honey from outside brood-combs, which with us are solid with very nice honey, and replacing the empty combs near the center of the hives. This is particular work, and requires judgment and tact, otherwise the robber bees would soon have possession of the apiary. It is easy enough to take the combs away from the bees, but when the combs from which most of the honey has been extracted, are returned, it causes great excitement, and soon attracts the robbers. We found that about the only time we could do this kind of work was late in the afternoon, about an hour or two before dark. By having a number of empty combs they could be exchanged for full ones, and the confusion would all be over before morning. With wire screen doors and windows, the extracting can be done any time during the day. Some of this honey was put up in pint, quart, and half gallon Mason jars. We found that by exposing these to the sun for a week or two, the color of the honey became much lighter, and the quality was also much improved.

Milan, Ills.

THE CELLAR.

Ingenious Harness Used for Carrying Bee-Hives.

Written for Gleanings in Bee-Culture
BY G. M. DOOLITTLE.

I am asked to give an article on the above subject; and as the asker puts his query in the shape of several questions, I think it best to answer them by number, in the order they are put.

First, he says, "I should like to know how I can place the bees in the cellar without disturbing them." This is nearly an impossibility, as far as not arousing them at all is concerned, for bees are sensitive to the least movement of their home, and, no matter how still it may be done, if done times enough the result always is a restless colony. But, practically speaking, bees can be set in the cellar without disturbance, or, in other words, not be disturbed enough so that it is noticeable, or to do any harm. In fact, I am not sure that a disturbance, so great as to cause them to come out all over the front of the hive after they are in the cellar, does any harm, yet I prefer not to so disturb them.

I have two ways of carrying the bees to the cellar: one of which is, to get a strap of the harness-maker, or otherwise, long enough to go over my shoulders, and reach the cleat that goes around the top of the hive, or the hand-holes, if cleats are not used, so that the hive may be held up in about the position that it would naturally be when carried in the hands. Now get two large snaps, such as are used on the breast-straps of heavy harness, and have them sowed, one on each end of the strap. After this is done, take out the tongues, or snap part, of each, and file the projecting hook part of the snaps to a sharp point, when your strap is ready. On going to the hive, throw the strap over the shoulders, and, on stooping down, hitch the sharp points of the snaps into the cleats, or hand-holes, of the hive, and straighten up, thus lifting the hive by the shoulders, instead of the arms. With the hands, keep the hive away from the body, and thus you can carry it as still as you please.

The other way, and the best one for all not physically strong, is to get a spring wheelbarrow, and on this place a sawdust cushion, such as is used over the hives in winter; or, in the absence of this, put on several thicknesses of old carpet, or horse-blankets, and on this set the hive, when it can be wheeled right into the cellar, if the cellar is built as it should be, or to the cellar-door, in any event. In this way no serious disturbance should be

caused, if set on and off the wheelbarrow as they should be.

Secondly, he says, "I want to raise them an inch off the bottom-board." This is as it should be, only, instead of an inch, I prefer that the distance be 2 inches, or, better still, the whole height of the hive. By this, I mean to let the bottom edges of one hive rest on the top edges of two other hives, so that there is an open space, the size of a hive, under each hive except the bottom ones.

To explain more fully: I first carry into the cellar some bottom-boards, placing them on the cellar bottom nearly as far apart as the width of a hive. On these bottom-boards I place a 2-inch rim, and on these rims I place the first tier of hives, which leaves the hives a little too close for a hive to stand between them. Now, in setting in the next tier, they are set on the other hives, so as to come over this space between the hives below, they resting on the edges of the hives below, as I said at first, the next tier setting over the empty spaces between the last, and so on until the top of the cellar is reached. To keep the dead bees, etc., from soiling the cushions and hives below, newspapers are spread over them before the next tier is set on top. I believe this is something similar to the way friend Boardman winters his bees. In any event, I like the plan very much.

When to Carry Bees into the Cellar.

Thirdly he asks, "Is it best to carry them in in the daytime or after dark?" As to this matter, I do not know that it makes any difference with the bees. The only thing to be considered is the convenience of the operator, and the prospect of what the weather will be on the following day. I have frequently carried in my bees on a moonlight evening, when I feared it might rain the next morning, for I consider it a great disadvantage to have the hives set in the cellar when dry. At other times I have risen at 4 o'clock in the morning and set the bees in before daylight, getting them in just as it was commencing to rain; still, the most of the setting-in has been done by daylight, thus having the advantage as far as seeing is concerned.

Fourthly he asks, "Should the weather be cold or warm, when the bees are set in?" I used to think that the weather should be cold, in order that the bees need not fly out of the hive if they were disturbed, fearing that they would disturb easier in warm weather than in cold; but after an experience of the past five years, I now say, set them in when the outside air is nearly or of the same temperature of that in the cellar, if possible, and

never when the hives are full of frost, and frozen down, if it can be avoided.

Where hives are frozen down to the bottom-boards, and the outsides of them covered with snow and ice, it is the worst time possible to carry them in; while getting them in at such a time without disturbing them is out of the question, for each hive will come up from the bottom-board with such a shock that all the bees in the hive are at once aroused. The proper temperature in which to set them in is from 35° to 50°; but as this cannot always be obtained, from 30° to 35° will do very well.

In closing, I will say that the time of year in which to set bees in the cellar is from Oct. 25 to Nov. 20, according to latitude, and not in December, as used to be advocated.

Borodino, N. Y.

KENTUCKY.

Some of the Good Results of the Past Season.

Written for the American Bee Journal
BY GEO. W. MORRIS.

My report for the past season is as follows:

My 11 colonies of Italian bees wintered without loss. They bred up early, and began to swarm early in May, but I checked swarming as much as possible by extracting. All the surplus obtained in June was honey-dew, amounting to 500 pounds. This honey is dark, and not very well flavored. Bees ceased to gather it about June 20.

With the exception of the clovers, sunflowers, and some other bloom, all of which was very scarce, bees had no forage until the asters commenced to bloom, about Sept. 20, when they rallied and gave me a surplus of 400 pounds of as pretty white honey as I ever saw.

My apiary has produced the following results this season: Four hundred pounds of white honey, at 12½ cents, \$50; 500 pounds of honey-dew honey at 10 cents, \$50; for queens, \$18; and for 6 swarms, \$12, making a total of \$130.

This is the second season that the asters have given much surplus in this locality, last season being the first. I have been noticing it for about six years, and it is increasing very rapidly, and bids fair to outstrip all other pasturage for bees, especially as fall pasturage, and for extracted honey, because bees can gather and store honey when it is too cool to build comb.

I believe it would pay me to cultivate sunflowers by the acre, and have them bloom in August and September,

in order to keep my bees built up strong for the fall crop. I planted one row of them in the garden this season, and the bees worked on them at least four weeks, as busily as ever they worked on Alsike clover in this locality. If any know of a better substitute for bee-pasturage than the above plant, I would be glad to hear from them through the BEE JOURNAL.

The prospect now for white clover is much better than it was one year ago in this locality. My bees paid me better than any yet heard from in this State the past season.

Cornishville, Ky., Nov. 1, 1888.

CARNIOLANS.

The Value of Carniolan Bees—They are Not Robbers.

Written for the American Bee Journal
BY S. W. MORRISON, M. D.

For the introduction of Carniolan bees into this country, Mr. Benton deserves the gratitude of all bee-keepers. As having the largest experience in the United States with Carniolans, I am entitled to express my opinion of them at this time, the close of the third summer with 50 colonies.

The most notable new trait about them is, their freedom from the disposition to "rob," or their vigilance in guarding their hives. With 200 nuclei colonies, daily exposure of their combs, and a poor honey season, it is remarkable that I have not had a single colony robbed. Such freedom from robbing never happened to me when I had Italians.

I am still convinced that Carniolans are better honey-gatherers than Italians, Cyprians or Syrians; and as for gentleness, I have little use for smokers, and many colonies can be handled with the same impunity as if they were so many flies.

In the issue for Nov. 7 is published a complaint against Mr. Frank Benton, which is certainly unjust. Mr. Benton may see the article, or he may not. Many will read it who will not see the reply he makes to correct it, and thus a wrong is done him which he can never correct. I have had probably more business transactions with Mr. Benton during the past five years than any other person in the United States, and I can vouch for his honesty and promptness.

Mr. Benton left Munich in the spring of 1887, I think, and spent the winter of 1887-88 in Laibach, Province of Carniola, Austria, because he could not afford to incur the expense of the return to Munich. His last letter to me was dated at Laibach, Sept. 29; in

it he stated that he expected to spend the winter elsewhere, but did not give me his address. Registered letters only will be forwarded to him. It is fair to suppose that Major Shallard's letters never reached Mr. Benton. Oxford, Pa.

[No injury to Mr. Benton was intended by the publication of the complaint—just the reverse, it gives him a chance to fix the matter up. The fact of his moving after Sept. 29, 1888, has no relation to the previous fact that Major Shallard has been writing him for over two years, and can get nothing but an acknowledgement for the money sent. We sent him a marked copy of the JOURNAL containing the article, and we hope that he will be able to fully explain the cause of the delay. Publishing the matter will be a benefit to him, then.

Since the above was in type, we notice an article on Carniolan queens in the *British Bee Journal*, written by Mr. Benton, and dated at Laibach, Oct. 19, 1888, nearly a month later than the date given by Dr. Morrison. He will probably receive the marked copy we mailed to him.—ED.]

BEEES AND ODORS.

Robbing Stopped by the Use of Musk and Peppermint.

Written for the Country Gentleman
BY A COUNTRY PARSON.

Twenty-five years ago I began bee-keeping with a row of hives, all painted alike, and placed close together, say 12 inches apart. This likeness and nearness of hives, together with my work and fussing, soon brought on the calamity—robbing right and left, stealing, fighting and killing, until some of the hives were empty, and the ground covered with dead bees. I rushed to my library, and then tried the plans prescribed as infallible remedies—tied them up in sheets; deluged them with water; buried them in loose straw; smashed the robbers' combs; put them to sleep with chloroform; shifted positions of hives. But they still fought and robbed, and killed like little demons.

Then I sat down to study out a remedy, or to see the end of the Killenny-cat process. I soon found the difficulty to be in this—that the robbed bees could not distinguish between the friends in their own family and their enemies from other families. I

could tell which were robbers from their hesitating flight about the entrance of the doomed hive. The home bees came in like an arrow from a bow. The robbers hesitated, backed and filled, and seemed watching for a chance to get in. But of this sign the home guard seemed to take no notice. From this I concluded that they did not discriminate by sight.

In this way I went on to eliminate the different senses from their method of discrimination, until at last I reached the conclusion that the sense of smell was their chief, if not their only dependence.

But to return to our robbers. The guards are on duty at the entrance of the hive. The robber lands on the alighting-board. He either steals in unobserved, or is challenged. If he has been in the hive often enough to have acquired the right odor, he is admitted as a friend. If the scent is not clear, he is doubted, and there is hesitation. If he brings a brand-new and strange odor, he is "bounced," and a fight begins that generally ends in the death of the bouncer or bounced.

This suggested the remedy. I took some musk, wrapped it loosely in muslin and covered the package with wire-netting, for fear the bees might eat it and get poisoned, or tear it to pieces and carry it out of the hive. This little package, about 1 inch long and $\frac{1}{2}$ inch in diameter, I dropped in the midst of the combs of the robbed hive.

The next step was to get a contrasting and strong odor for the robber hive. I selected essence of peppermint, diluted an ounce of it with a pint of milk-warm water, borrowed my wife's in-door plant sprinkler, uncovered the robbing hives, and gave them a dash of their perfumery.

It is not easy to laugh alone, but I did laugh out long and loud when I saw the result. The musk guards waited in alert expectancy. A peppermint robber began to buzz around, but the musk fellow detected its presence, and followed every motion of the peppermint adversary, by turning his belligerent front, when the robber was at least 12 inches distant. And when he would venture within 2 or 3 inches of the vigilant musker, the guard would fairly leap at him and catch him "on the wing." There was no room for fight, and no killing. The alien peppermint robber would flee with the cowardice of his profession.

It is no exaggeration to say that within five minutes the whole thing was stopped, and for good. The remedy is effective, and can be applied with little trouble, and not more than two minutes of time.

Staten Island, N. Y.

CONVENTION DIRECTORY.

- 1888 Time and Place of Meeting.
 Nov. 21, 22.—Pan-Handle, at Wheeling, W. Va.
 W. L. Kinsey, Sec., Blaine, O.
 Dec. 11-13.—New York State, at Syracuse, N. Y.
 G. H. Knickerbocker, Sec., Fine Plains, N. Y.
 Dec. 12, 13.—Michigan State, at Jackson, Mich.
 H. D. Cutting, Sec., Clinton, Mich.
 1889.
 Jan. 9-11.—Nebraska State, at Lincoln, Nebr.
 J. N. Heater, Sec., Columbus, Nebr.
 May 4.—Susquehanna County, at Montrose, Pa.
 H. M. Seeley, Sec., Hartford, Pa.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM
OUR LETTER BOX

Bees in Winter Quarters.—J. W. Tefft, Collamer, N. Y., on Oct. 30, 1888, writes as follows:

For once I have been fortunate. I had my bees all packed for winter on the summer stands by Oct. 1. Had I not done so, I do not think I could have done it by this time, for nothing seems to come but rain. The temperature has for the past thirty days been as low as 28°, and only on three days has it been up to 60°, and then only between the hours of 12 and 3. I have not seen a bee flying except on three days when it was 60°. We have nothing to do but saw wood and keep out of the mud, which is "too soft to walk upon, and too thin to swim in," which makes it very inconvenient to navigate.

Small Increase, etc.—John Moller, Fremont, Nebr., on Nov. 12, 1888, writes:

I have had a very small increase in colonies during the past summer, and not much honey until the fall gathering. I have obtained 2,000 pounds from 50 colonies.

Southern Aster Honey.—W. H. Prior, Madison, Ga., on Nov. 12, 1888, writes as follows:

I send a wild flower and stem of the same (I think an aster), which has proved to be by far the best honey-producer as to both quantity and quality that we have had during the entire year. It made its appearance here some 20 years ago, and has been spreading gradually until this year, and to use an old and familiar expression, "The whole face of the earth was covered with it." In fact it was everywhere, along the road side, in every old field, and could be seen everywhere except on land that was in cultivation. It is commonly known as "The last flower of summer," or "Farewell summer." It began opening about Oct. 10 this year, and has continued up to the present time.

We had our first frost this morning, giving us a very late fall. This flower came up all among the golden-rod, and towered above it with beautiful white flowers. As soon as it began opening, the bees left the golden-rod and began working on it. I have one colony, and by no means a full colony, that has stored, with only starters, 20 pounds of nice comb honey in pound sections, since Oct. 12. My 18 colonies averaged 20 pounds of honey per colony in October. Had I expected the honey-flow, I could have secured 25 pounds per colony, just as easily. We

had a rain of more than a week beginning about Oct. 20, that cut us short about one-third of a crop.

I began bee-keeping last spring with 5 weak colonies of black bees in box-hives; now I have 18 colonies of Italian bees in movable frame hives (having bought 12 queens and reared 6), with plenty of honey for winter, besides 25 pounds of comb honey extra per colony, spring count. How will that do for a beginner?

Thinking that it would be something of a novelty for the editor, away up in Chicago, to eat honey gathered from flowers in the month of November, as well as for him to see a good quality of Southern honey, I have sent him by express a pound section that was taken from the hive on Saturday, Nov. 10, just finished by the bees. This was gathered from the white flower mentioned above. I will ask the editor to tell me what he thinks of the honey, and to name the flower.

[The flower is from an *Aster tradescanti*, sometimes called the "Michaelmas daisy," and produces excellent honey of light amber color, and fine flavor. The sample of honey came, all mashed up, with about an ounce of honey on the paper, the comb being all drained dry. This shows what care is taken of small packages by the express companies.—ED.]

Results of the Season.—S. Burton, Eureka, Ills., on Nov. 12, 1888, writes:

I commenced with 14 colonies of bees last spring, 10 colonies being strong, and 4 weak. I had 18 swarms, 4 of which went to the woods, leaving me 14 new colonies. I bought 4 colonies, so I now have 32. All are packed on the summer stands with a shed over them facing the east and south, packed with straw behind and between them; with sticks across the frames, burlap over the sticks, a cushion of leaves on top of that, and then the hive-cover. My crop of honey was gathered after Aug. 20. I got about 300 pounds of surplus in one-pound sections, and the bees have their hives well filled for winter. I am getting the bee-fever. I want to have 100 colonies of bees as soon as I can, as I am the only one that has any bees to amount to anything here.

Getting Rid of Ants.—Byron Benton, Bronson, Mich., on Nov. 13, 1888, writes as follows:

My way of getting rid of ants in bee-hives is to kill what I can, and then place green catnip over the brood where the ants gather, which I find drives them away effectually. There must be a great loss of bees here this winter among such bee-men that have not fed their bees.

The Michigan Convention.—President Geo. E. Hilton, of Fremont, Mich., writes as follows concerning the coming meeting of the State Convention:

The Michigan State Bee-Keepers' Association hold their next annual meeting at Jackson, Mich., on Dec. 12 and 13, 1888. While the season has been far from encouraging, we want to give a cordial invitation to all within reach of the association, to favor us with their presence; and I can assure all that we will have subjects for discussion that will be encouraging, for Michigan is not going to lose her record of holding the "Convention of the Continent," and we expect to send all home with "Nil desperandum" as their motto.

Honey and Beeswax Market.

CHICAGO.

HONEY.—We quote: White clover 1-lb., 18@19c.; 2-lbs., 13@14c. Good dark 1-lb., 15@16c.; 2-lbs., 13@14c. Buckwheat 1-lb., 14@15c.; 2-lbs., 12@13c.—Extracted, 7@8c., depending upon quality and style of package. Receipts increasing, but demand still limited. Stock is not selling as freely this season as a year ago.

BEESWAX.—22c. S. T. FISH & CO., 189 S. Water St. Nov. 13.

CHICAGO.

HONEY.—For white comb 1-lb., 18c. Very little inquiry for anything outside of 1-lb., and when it is wanted it is at a lower price. Extracted, the best grades, 7@8c., and some held higher. Offerings are small and demand slow.

BEESWAX.—22c. R. A. BURNETT, 161 South Water St. Sep. 12.

MILWAUKEE.

HONEY.—We quote: Fancy white 1-lb., 18@20c.; 2-lbs., 16@18c. Good dark 1-lb., 16@18c.; 2-lbs., 15 to 16c.; fair 1-lb., 12@14c. Extracted, white, in kegs and ½-barrels, 8@9c.; amber in same, 7@8c.; in pails and tin, white, 9@9½c.; in barrels and half-barrels, dark, 6@6½c. Market steady and supply ample for the moderate demand, but present values have a tendency to restrict general consumption.

BEESWAX.—22@23c. A. V. BISHOP, 142 W. Water St. Oct. 25.

NEW YORK.

HONEY.—We quote: Fancy white 1-lb., 15@17c.; 2-lbs., 14@16c. Fair white 1-lb., 14@16c.; 2-lbs., 13 to 15c. Extracted, white, 7½@8c.

BEESWAX.—23½c. THURBER, WHYLAND & CO. Sep. 17.

NEW YORK.

HONEY.—We quote: Fancy white 1-lb., 17@18c.; 2-lbs., 13@14c. Fair white 1-lb., 15@16c.; 2-lbs., 12c. Buckwheat 1-lb., 11@12c.; 2-lbs., 10@11c. White extracted, 7½@8½c.; buckwheat, 5½@6½c.; California extracted, white sage, 7½@7¾c.; amber, 7¼@7½c. Demand good and prices firm. New comb honey is arriving quite freely.

BEESWAX.—23@23½c. HILDRETH BROS. & SEGELKEN, 28 & 30 W. Broadway, near Duane St. Oct. 10.

SAN FRANCISCO.

HONEY.—White 1-lb. sections, 11@12½c.; 2-lbs., 12½@13 c.; amber, 8@10c. Extracted, white, 5½@6c.; light amber, 5¼@5½c.; amber and candied, 4¼@5c. Receipts light and market firm for best qualities.

BEESWAX.—Dull at 19@22½c. O. B. SMITH & CO., 425 Front St. Sep. 22.

DETROIT.

HONEY.—Best white comb, 17@18c.; dark, 16c.—Extracted, 8@10c. Market bare of all kinds.

BEESWAX.—21@22c. M. H. HUNT, Bell Branch, Mich. Sep. 24.

CINCINNATI.

HONEY.—We quote extracted at 5@5c. per lb. Best white comb honey, 16c. Demand slow.

BEESWAX.—Demand is good—25@26c. per lb. for good to choice yellow, on arrival.

Nov. 12. C. F. MUTH & SON, Freeman & Central Av.

KANSAS CITY.

HONEY.—Choice 1-lb. sections, 18c.; dark 1-lb., 14c.; 2-lbs., 12c.; dark, 13c. White extracted in 60-lb. cans, 8c.; amber, 7c.; in barrels and kegs, 5@5c. Demand good, prices steady, and stock fair.

BEESWAX.—None in market. HAMBLIN & BEARSS, 514 Walnut St. Sep. 27.

NEW YORK.

HONEY.—We quote: Fancy white 1-lb. sections, 17½@18c.; 2-lbs., 14@15c. Fair 1-lb., 14½@15½c.; 2-lbs., 11@12c. Extracted, fancy white clover, 7½@8½c. California white in 60-lb. cans, 8c.; light amber in same cans, 7½c.; amber, 7¼c. Buckwheat in kegs and barrels, 5½@6c. Cuban, in barrels and ½-barrels, 65c. per gallon.

Sep. 26. F. G. STROHMEYER & CO., 122 Water St.

BOSTON.

HONEY.—We quote: Best white clover 1-pound, 17@18c.; best 2-lb., 16@17c. Extracted, 8@9c. The receipts are very light, and honey sells fairly well.

Nov. 12. BLAKE & RIPLEY, 57 Chatham Street.

KANSAS CITY.

HONEY.—White 1-lb., 17@18c.; dark, 14@15c.; California white 1-lb., 17c.; dark, 14c. Extracted white 8c.; amber, 7c.

BEESWAX.—None in the market. CLEMONS, CLOON & CO., cor 4th & Walnut. Oct. 11.

ST. LOUIS.

HONEY.—We quote: Extracted in barrels, 5@6c., according to quality; in cans, 7@8c. Comb, 12½@13c. Prices firmer on account of scarcity, though the demand is not great.

BEESWAX.—21c. for prime. D. G. TUTT & CO., Commercial St. Oct. 17.

SAN FRANCISCO.

HONEY.—We quote: Extracted, white, 6½ cents; light amber, 6@6½c.; amber, 5½c. Comb, white 1-lb., 13@14c.; 2-lbs., 13c. Light amber 1-lb., 12@13c.; 2-lbs., 11@12c. Demand very active for extracted, and fair for comb honey.

BEESWAX.—20@21c. SCHACHT & LEMCKE, 122-124 Davis St. Nov. 6.